

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A method for synchronizing operation at a node of a communication network, said method comprising:

receiving two or more input frame synchronization signals and transmitting an output frame synchronization signal, ~~the output frame synchronization signal being associated with a predefined one of said input frame synchronization signals;~~

~~selecting one of said input frame synchronization signals to define~~ defining a node common frame synchronization signal based upon one or more of said input frame synchronization signals;

generating the output frame synchronization signal using the node common frame synchronization signal as reference for synchronization;

determining a phase relationship between the output frame synchronization signal and at least one of the input frame synchronization ~~signal that is associated therewith~~ signals; and, ~~based thereupon~~ adjusting said phase relationship by adjusting a phase relationship between the output frame synchronization signal and the node common synchronization signal when generating the output frame synchronization signal,

wherein said output frame synchronization signal is synchronized in relation to said at least one of the input frame synchronization signal in such a way that:

a) said output frame synchronization signal is permitted to show an arbitrary phase difference in relation to said at least one of said input frame synchronization signal;

b) said output frame synchronization signal is permitted to show an acceptable phase jitter in relation to said at least one of said input frame synchronization signals; and

c) said output frame synchronization signal is not permitted to show any persistent phase drift in relation to said at least one of said input frame synchronization signal.

2. (Currently amended) A method as claimed in claim 1, wherein said adjusting step is performed with the purpose of controlling the time difference between each transmission of the output frame synchronization signal **and** each reception of **said at least one of** the input frame synchronization ~~signal that is associated therewith~~ **signals**.

3. (Original) A method as claimed in claim 2, wherein said adjusting step comprises increasing said phase difference if said time difference is smaller than a selected time difference, and decreasing said phase difference if said time difference is larger than said selected time difference.

4. (Previously presented) A method as claimed in claim 1, wherein data to be outputted as part of frames defined by said output frame synchronization signal is stored in a memory prior to transmission thereof, the data fill level of said memory reflecting the phase relationship between the output frame synchronization signal and

the input frame synchronization signal that is associated therewith, and wherein the phase relationship between the output frame synchronization signal and the node common synchronization signal is adjusted so as to maintain a selected data fill level of said memory.

5. (Previously presented) A method as claimed in claim 1, wherein frames defined by said frame synchronization signals occur regularly, are of fixed size, and are each divided into a plurality of fixed sized time slots.

6. (Previously presented) A method as claimed in claim 1, comprising:
transmitting, in addition to said output frame synchronization signal, at least one other output frame synchronization signal, each output frame synchronization signal being generated using said node common synchronization signal as reference for synchronization; and

adjusting each output frame synchronization signal individually to show a respective phase relationship in relation to said node common synchronization.

7. (Original) A method as claimed in claim 1, each output frame synchronization signal being associated with a respective input frame synchronization signal, said method comprising adjusting a respective phase relationship between each respective output frame synchronization signal and the respective associated input frame synchronization signal by adjusting the respective phase relationship between each respective output frame synchronization signal and the node common frame synchronization signal.

8. (Previously presented) A method as claimed in claim 1, comprising defining said node common frame synchronization signal in such a way that a change in the selection of input frame synchronization signal to define said node common synchronization signal does not cause any phase shifts in said node common synchronization signal.

9. (Original) A method as claimed in claim 1, comprising determining the frame phase difference between the node common synchronization signal and at least one of said input frame synchronization signals that is to define said node common synchronization signal, wherein a change into using said input frame synchronization signal to define said node common synchronization signal is performed in such a way that the determined frame phase difference between said node synchronization signal and said input frame synchronization signal is maintained.

10. (Canceled).

11. (Previously presented) A method as claimed in claim 1, wherein said method is performed in a time division multiplexed circuit switched network.

12. (Previously presented) A method as claimed in claim 1, wherein each one of said frame synchronization signals is an in-band frame start signal that is transmitted on a respective link to designate the start of each frame transmitted thereon.

13. (Currently amended) A method for synchronizing operation at a node of a communication network, comprising:

receiving an input frame synchronization signal;

transmitting an output frame synchronization signal that is associated with said input frame synchronization signal; **and**

controlling a phase relationship between the output frame synchronization signal and the input frame synchronization signal by the step of adjusting a phase relationship between the output frame synchronization signal and **a** signal that is defined optionally using another input frame synchronization signal as reference for synchronization;

wherein said output frame synchronization signal is synchronized in relation to the input frame synchronization signal in such a way that:

a) said output frame synchronization signal is permitted to show an arbitrary phase difference in relation to said input frame synchronization signal;

b) said output frame synchronization signal is permitted to show an acceptable phase jitter in relation to said input frame synchronization signals;
and

c) said output frame synchronization signal is not permitted to show any persistent phase drift in relation to said input frame synchronization signal.

14. (Currently amended) An apparatus in a communication network, said apparatus comprising:

an interface defined by input means (250) for ~~receiving~~ **receiving** an input frame synchronization signal and associated output means (500) for transmitting an ~~assiciated~~ **associated** output frame synchronization signal;

means (300) for providing a node common synchronization signal derived ~~from a~~
~~currently selected one of two~~ from one or more input frame synchronization signals,
~~one thereof being the first mentioned input frame synchronization signal;~~

means (530; 531) for determining a phase relationship between the first
mentioned input frame synchronization signal and the associated output frame
synchronization signal; and

means (540,550; 541,551) for generating said output frame synchronization
signal using said node common synchronization signal as reference and, in doing so,
adjusting the phase relationship between the first mentioned input frame
synchronization signal and the output frame synchronization signal as desired by
adjusting a phase relationship between the node common synchronization signal and
the output frame synchronization signal,

said apparatus being arranged to synchronize said output frame
synchronization signal in relation to an input frame synchronization signal in
such a way that:

a) said output frame synchronization signal is permitted to show an
arbitrary phase difference in relation to said input frame synchronization signal;

b) said output frame synchronization signal is permitted to show a limited
phase jitter in relation to said input frame synchronization signal; and

c) said output frame synchronization signal is not permitted to show any
persistent phase drift in relation to said input frame synchronization signal.

15. (Original) An apparatus as claimed in claim 14, comprising means (530,540,550; 531,541,551) for generating another output frame synchronization signal using said node common synchronization signal as reference and, in doing so, adjusting a phase relationship between said another output frame synchronization signal and a respective input frame synchronization signal associated there- with by adjusting a phase difference between said another output frame synchronization signal and the node common synchronization signal.

16. (Original) An apparatus as claimed in claim 15, comprising means (450,540; 450,541) for adjusting said phase differences of said output frame synchronization signals in relation to said node synchronization signal so that each one of said output frame synchronization signals is controlled to show a respective phase difference in relation to said node synchronization signal, said respective phase difference being controlled individually for each respective output frame synchronization signal.

17. (Previously presented) An apparatus as claimed in claim 14, said means (300) for providing a node common synchronization signal being arranged to derive said node common synchronization signal in such a way that a change of input frame synchronization signal to be used to derive the node common synchronization signal does not cause any phase shifts in said node common synchronization signal.

18. (Canceled).

19. (Previously presented) An apparatus as claimed in claim 14, wherein said apparatus is operating in a time division multiplexed circuit switched network.

20. (Currently amended) An apparatus in a communication network,
comprising:

an interface comprising an input port for receiving an input frame synchronization
signal and an output port for transmitting an output frame synchronization signal; and

means being arranged to control a phase relationship between the output frame
synchronization signal and the input frame synchronization signal by adjusting a phase
relationship between the output frame synchronization signal and a reference signal that
as such is defined optionally using another input frame synchronization signal as
reference for synchronization,

**said apparatus being arranged to synchronize said output frame
synchronization signal in relation to an input frame synchronization signal in
such a way that:**

**a) said output frame synchronization signal is permitted to show an
arbitrary phase difference in relation to said input frame synchronization signal;**

**b) said output frame synchronization signal is permitted to show a limited
phase jitter in relation to said input frame synchronization signal; and**

**c) said output frame synchronization signal is not permitted to show any
persistent phase drift in relation to said input frame synchronization signal.**